THE RELATION OF EARNINGS QUALITY TO ACCOUNTING CONSERVATISM

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ABSTRACT

The aim of this article is to examine the relationship between accounting conservatism and earnings quality. Data were collected from 50 industrial corporations listed in Amman Stock Exchange (ASE) between 2004-2009. Hypotheses were tested using Ordinary Least Squares (OLS) and Binary Logistic under Pooled Regression. The findings revealed that the level of conservatism was low in such companies, but earnings quality was reasonable. The study found that there was no variance between levels of earnings quality of the Jordanian industrial corporations, due to the disparity of the level of conservatism in their financial reports.

I. INTRODUCTION

Decisions based on earnings information vary according to different users of financial statements, while shareholders consider earnings the criterion of managers' performance for rewards, creditors depend on earnings when taking credit decisions. As for investors, they take earnings as a means of evaluating their investments through what the recent earnings predict regarding the earning continuity in the coming epochs (Block, 1999). Dependence on numbers alone, without considering other factors that affect the level of earnings quality such as earnings management and the rise in accruals ratio, leads to taking reasonable decisions which focus on earnings amount without any regard to quality. (Chan *et al,* 2006). Most of past studies revealed that constant earnings were indicators of quality. As accounting conservatism impels loss confession and delays earnings, the confession of net earnings is away from optimism that holds a great amount of continuity in the future. Consequently, many researchers tried to establish relationship between accounting conservatism and earnings quality, which is the concern of this study. But what if the company practices earnings management in order to reduce its earnings (negative earnings management), can we then talk about the quality of such earnings? We all know that one of the most

important methods adopted by the company to reduce earnings is discretionary accruals. Sloan (1996) indicated that earnings quality means constant cash flows other than constant accruals. This does not contradict with negative earnings management. What if we know that some people like (Labo & Zhou, 2006; Jain & Rezaee 2004; Yaseen 2008) consider accruals reduction in ratio to less than earnings within a certain period of time to be an indicator that companies follow conservative policies and delay the confession of earnings. Thus, we can theoretically say that wherever there is accounting conservatism, earnings quality exists. Such a thing does not hamper the company from following earnings negative management as long as it is within the limits of international accounting standards. Standard designers, legislators, and auditors consider earnings as high quality, if it is disclosed in conformity with generally accepted accounting principles, creditors consider it good whenever potentials to change into cash flows are higher. Compensation bodies in American companies consider earnings quality to be high when it reflects the actual performance of managers without being affected by external factors outside their control. (Dechow & Schrand, 2004; Qaraqeesh, 2009)

Achieving goals of accounting information for preceding groups is what accounting standards, which contain a great amount of conservatism, tried to secure. Thus, the major problem of this study lies in its attempt to find answers to the following questions: Do financial reports issued by industrial companies listed on (ASE) reflect a reasonable level of conservatism and earnings quality? Can we prove that there is theoretical relation between accounting

conservatism and earnings quality? This study is the latest among efforts exerted to determine the level of accounting conservatism in Jordanian companies and factors affecting them. After the studing: company size, debt contracts, sector to which the company belongs, regarding the level of accounting conservatism, in addition to the relation between audit quality and accounting conservatism, and its role in improving the quality of financial reports, this study becomes an important block in the field as it tries to answer a question which has been frequently repeated by past studies on the relation between accounting conservatism and earnings quality. Hereby, it endeavors to measure accounting conservatism using a methodology different from ones used by past studies. It also tries to check earnings quality of industrial companies listed on (ASE). It eventually looks for the relation between accounting conservatism and earnings quality.

The article is organized as follows: section two: literature review and previous studies, section three: study methodology, section four: analysis of study findings, section five: discussion of conclusion, recommendations, limitations, and future studies.

II. LITERATURE REVIEW AND PREVIOUS STUDIES

Investors concerned with earnings quality increased during the last decade after many international companies announced about non-authentic and temporary earnings as part of their quarterly reports. Thus, investors became more cautious in considering net earnings. (Ohlson & Feltham, 1995) define earnings quality as investor's ability to predict future abnormal earnings depending

on recent data. But Qaraqeesh, (2009) sees that the real earnings quality is the one honestly and justly announced by companies about their actual earnings. In other words, the announced earnings of companies have a substantial financial existence which is void of exaggeration or probability figures.

Many definitions of earnings quality revolve around the two previous ones. Earnings quality is the ability of the present earnings to provide a real picture about the company and its ability to survive in the future. The significance of earnings quality stems from earnings on which many parties depend when they take their decision (Dechow & Dichev, 2002).

Qaraqeesh, (2009) believes that earnings quality is considered an important factor in the financial statement and is used as a guidance to decision making. Depending on earnings of low quality leads to inappropriate management of fortune (Schipper & Vincent, 2003). Understanding earnings quality plays important role in the process of financial analysis; earnings of high quality help financial analysts in analyzing three basic sides of information which are: present functional performance of the company, future functional performance and value of the company. (Dechow & schrand, 2004). In addition, earnings quality might be used as an indicator of dividends. Farinha & Moreira, (2007) ascertains that there is relation between earnings quality and dividends, possibility of dividends by companies increases as quality itself improves, the amount of such dividends also increases.

There are different views regarding concept of earnings quality, while some use earnings continuity as standard of its quality as explained by (Altamuro & Beatty, 2006), the continuity of earnings refers to the relationship between present earnings with future ones. As earnings are divided into cash flows and accruals, quality earnings means that cash flows are more than accruals (Sloan, 1996). Others indicate that earnings quality is better once free from earnings management practices; the less discretionary accruals are the better quality is (Francis *et al,* 2004; Dechow & Dichev, 2002; Al-Sharif, 2008). Different styles for measuring earnings quality led to different evaluations, the same company might be given higher or lower quality level according to the earnings quality form adopted (Abdelghani, 2005).

At the same time Baxter & Cotter, (2009) tried to study the forming and characteristics of audit committees and their impact on improving earnings quality in a sample of Australian companies before introducing obligatory requirements to audit committees 2003. The results of that study showed that forming audit committee reduces earnings management, but did not reduce accrual estimation errors. The study also showed that there was significant relation between financial experience of members of audit committee and earnings quality improvement. The other qualities of audit committee did not have any relatively significant relation with earnings quality.

Various studies provided many other factors influencing earnings quality. Teitel, & Machuga, (2010) found that supporting rules of corporate governance contributed in improvement of earnings quality. Altamuro & Beatty, (2006) also found that internal control quality played a role in improving earnings quality.

In comparing public firms with private ones, Givoly *et al,* (2010) found that the public ones were more conservative in their financial reports than private ones and their management practice through using normal accruals was less. Consequently, earnings quality in these firms was better than that in the private ones and that was due to the desire of the directors of public firms to avoid litigation risk and agency costs.

With regard to the relation between auditing quality and improving earnings quality, Hamdan & Abu Ijeila, (2012) found that auditing quality of audit offices in Jordan did not contribute in limiting earning management practices in Jordan industrial companies subject to auditing. Such offices never played a role in increasing earning qualities in Jordanian industrial companies. But Teitel & Machuga's, (2010) study on the impact of application of Code of Best Governance Practices in the presence of external auditors from highly qualified audit offices found that it helps in improving earnings quality. Balsam *et al,* (2003) studied the impact of one of the auditing quality professional auditor's specialization on discretionary accruals and found that the companies which used professional specialized auditors had less discretionary accruals compared to companies which used less professionally specialized auditors. Therefore, one can claim that companies with professionally specialized auditors enjoy a higher level of earnings quality.

Today, in the middle of the waves of skepticism regarding financial reports, adherence to this principle became a distinguishing aspect for companies with reference to the transparency of their financial reports and a standard for classifying countries according to adherence to accounting principles (Hamdan, 2012) and conservatism which disclose the expected losses aside from the anticipated earnings, in addition to the lowest values of assets. Accounting conservatism implies using strict standards when declaring profits (LaFond & Roychowdhury, 2008). This should not lead to undervaluing of assets or income (IASB framework, paragraph 37) is: IASB, (2010). Applying International Financial Reporting Standards. Second Edition, Wiley Company, UK.

The need for conservatism appeared together with Agency Theory (Basu, 1997) to solve the problem that might emerge between managers and stockholders on separation between management and ownership. Suppose that financial reports issued by the management were conservative (Ball, *et al,* 2000; Watts, 2003b), stockholders might resort to reducing management salaries to compensate for the difference attributed to manager's care for their personal interests. To avoid such situation, managers might resort to present more conservative numbers as indication of not caring for their personal interests (Watts & Zimmerman, 1983), thus shunning legal responsibility (Givoly & Hayn, 2000). Ahmed & Duellman, (2007) found out that accounting conservatism helps reduce agency costs. Finally, Hamdan (2011) found that accounting conservatism contributes in improving.

As for the role of accounting conservatism in improving efficiency of debt contracts, studies of the last period ascertained that accounting conservatism helped in improving efficiency of debt contracts by increasing ability of accounting information to predict the future (Watts, 2003a; Ball and Shivakumar, 2005; Ball *et al,* 2008).

Accounting conservatism secures, for the debtors, more strict policies in declaring profits and consequently limits profit distribution as this provides the company with a better opportunity to meet its liabilities. But Gigler *et al,* (2009) see that accounting conservatism reduces the efficiency of debt contracts because it changes the content of accounting, thus reducing the possibility of future prediction.

In search for factors influencing the level of accounting conservatism, many studies considered distinction between companies regarding accounting conservatism in their financial reports. Hamdan, (2012) and Yaseen, (2008) found out that banks are the most conservative in their accounting policies. But (Al-Sahli, 2009) disagreed with them as he found that the banking sector in Saudi Arabia was the least conservative in its accounting policies. As for the relation between the size of company and accounting conservation, Hamdan, (2012) found that small companies adopt conservative accounting policies, but Al-Sahli (2009) did not find any relation between size of the company and degree of accounting conservatism. Hamdan, (2012) and Al-Sahli, (2009) did not find any effect of debt on accounting conservatism, but found that establishing Saudi Stock Exchange had an effect on accounting conservatism in financial reporting and that agreed with what the study of Labo & Zhou, (2006) reached at The demands of US securities Exchange Commission helped in increasing accounting conservatism in financial reporting. Accounting conservatism also helps in quality disclosure (Paprocki & Stone, 2004; Yaseen, 2008). Accounting conservatism also plays a role in earnings quality, being continuous (Penman & Zhang, 2002).
Our study differs from previous ones that

it tries to provide additional evidence on relation between accounting conservatism and earnings quality in Jordanian environment which was never tackled by any of the previous studies. It also tries to measure accounting conservatism and earnings quality using methods never used by past studies in Jordan.

III. RESEARCH METHODOLOGY

Study sample
The study sample included all Jordanian industrial corporations which meet the following conditions; availability of all necessary data, never been merged or delisted through the period of the study. The number of companies that met such conditions from 2004–2009 was 50 corporations.

Models and measuring of variables
This study aims to measure the relation between accounting conservatism and earnings quality. Due to this, the level of accounting conservatism in financial report should be measured first, then measure the level of earnings quality, and finally establish a relationship between them.

Measuring of conservatism
There are many propositions for measuring accounting conservatism of financial reports. The commonest three models are: the wide-spread Basu 1997 model, but this model can't be used in this study as a general index of the level of conservatism of a group of companies for certain period of time, in addition, its results can't be used in multiple-regression models to find the relation between conservatism and earnings quality. This model was used by Hamdan (2012) to measure the level of conservatism in reports issued by Jordanian companies.

The second measurement is the Book-to-Market (BTM) Approach which compares book value to that of the market in order to test value of the stock of origin by comparing its book value to the market value. The book value is calculated by dividing (total shareholders' equity minus preferred stocks) on the weighted-average number of shares outstanding, the market value is the closing price at the end of the year. (Beaver & Ryan, 2005). Jain & Rezaee, (2004) Indicated that as the Book-to-Market ratio is less than one when compared to the market value; such a thing implies the presence of an acceptable level of accounting conservatism in financial reports, this shows that the book value of the company is valued less than its real status, thus the essence of conservatism. Using (BTM) ratio suits this study as it provides us with annual value for each individual company; therefore, it might be used in multiple-regression model.

The third technique is the ratio of Total Accruals to Gross Profit (TATGP), adopting conservatism leads to continuity of negative accruals through long period of time because accruals increase income when positive and decrease it when negative (Mushtaha, 2008). total accruals are calculated according to cash flow techniques as shown in equation no. 1.

$$TACC_{i,t} = NI_{i,t} - OCF_{i,t} \quad \dots \quad (1)$$

Where:
$TACC_{i,t}$: is total accruals for firm (i) in year (t).
$NI_{i,t}$: is net income for firm (i) in year (t).
$OCF_{i,t}$: is operating cash flow for firm (i) in year (t).

Because various past studies checked the level of accounting conservatism in financial

reports issued by Jordanian corporations and produced significant results in this respect, independent hypothesis for the level of accounting conservatism will never be tackled in this study which will suffice itself with measuring the level of accounting conservatism in order to measure its relation to earnings quality.

Measuring of Earnings Quality

This study adopted two of the commonest models for measuring earnings quality which are: Richardson *et al,* (2005) model, and Jones, (1991) model as modified by Dechow *et al,* (1995).

The first model

There are different interpretations for earnings quality, among them is the use of earnings continuity as indicator of earnings quality (Altamuro & Beatty, 2006; Schipper & Vincent, 2003). Sloan, (1996) explained that earnings quality implies continuity of cash flows more than accruals continuity. Richardson *et al,* 2005) developed a model to determine the range of earnings continuity in the future as the following equation no. 2 shows.

$$ROI_{i,t+1} = \gamma_0 + \gamma_1 \left(ROI_{i,t} - TACC_{i,t} \right) + \gamma_2 TACC_{i,t} + \upsilon_{i,t+1} \quad \dots (2)$$

Where:
$ROI_{i,t+1}$: is return on investment for firm (i) in the next year (t+1).
γ_0: is constant.
γ_1: is continuity of cash flows.
γ_2: is continuity of accruals.
$ROI_{i,t}$: is return on investment for firm (i) in year (t).
$TAAC_{i,t}$: is total accruals for firm (i) in year (t).

Earnings quality means that next year's

earnings represented in returns on investment ($ROI_{i,t+1}$ dependent variable in equation no.2) is affected by earnings of the current year represented in γ_1 coefficient more than total accruals represented in γ_2 coefficient. Then, our hypothesis in the previous equation is $\gamma_2 - \gamma_1 < 0$ which indicates continuity of earnings in the coming years is more than the continuity of accruals as $\gamma_2 < \gamma_1$ known as earnings quality. To concentrate the continuity of accruals in earnings quality; we modify equation no.2 to become as follows:

$$ROI_{i,t+1} = \rho_0 + \rho_1 ROI_{i,t} + \rho_2 TACC_{i,t} + \upsilon_{i,t+1}$$
$$.............(3)$$

This equation might be rewritten regarding accruals continuity in equation no.1 as follows:

$$ROI_{i,t+1} = \gamma_0 + \gamma_1 \left(ROA_{i,t}\right) + \left(\gamma_2 - \gamma_1\right)TACC_{i,t}$$

$$)A_{i,t}\big) + \left(\gamma_2 - \gamma_1\right)TACC_{i,t} + \upsilon_{i,t+1} \quad ....(4)$$

As $\rho_1 = \gamma_1$ and $\rho_2 = (\gamma_2 - \gamma_1)$, this evaluation saves us the direct evaluation for $\gamma_1 - \gamma_2$ in equation no.2. Our first hypothesis is still $\rho_2 < 0$ as it is more negative in accruals representing earnings that imply the presence of high quality earnings. This model will be given the symbol (EQR).

The Second Model

The second measure of earnings quality is use of absolute value of discretionary accruals. To extract discretionary accruals, we used the modified version of the Jones (1991) model adjusted by Dechow *et al,* (1995). This model will be given the symbol (EQJones), this which is one of the most used methods in measuring earnings management that is used in the opposite direction of measuring earnings quality. As earning management means the intentional interference in preparing financial reports

by managers to achieve personal interests (Schipper, 1989), thus the opportunistic earnings management negatively affects earnings quality; this implies that the increase of management earnings is followed by a reduction in earnings quality (Baxtert & Cotter, 2009). Calculating discretionary accruals can be done through the following steps:

a) Total accruals evaluation which is the difference between net income and operating cash flows, according to the equation no.1

b) Slope evaluation $\beta_1, \beta_2, \beta_3$ in the following linear model:

$$\frac{TACC_{i,t}}{A_{i,t-1}} = \alpha + \beta_1 \left(\frac{1}{A_{i,t-1}}\right) + \beta_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) +$$

$$\beta_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \ell_{i,t} \quad .... (6)$$

Where:

$TACC_{i,t}$: is total accruals of firm (i) in year (t).

$A_{i,t-1}$: is total assets of firm (i) at the end of year (t-1).

$\triangle REV_{i,t}$: is change in revenues of firm (i) between years (t) and (t-1).

$\triangle REC_{i,t}$: is change in receivables of firm (i) between years (t) and (t-1).

$PPE_{i,t}$: is the level of fixed assets of firm (i) in year (t).

$\ell_{i,t}$: random error.

c) Normal accruals evaluation, using, $\beta_1, \beta_2, \beta_3$ derived from equation no.6 as Follows:

$$NACC_{i,t} = \beta_1 \left(\frac{1}{A_{i,t-1}}\right) + \beta_2 \left(\Delta REV_{i,t} - \Delta REC_{i,t}\right) +$$

$$\beta_3 \left(PPE_{i,t}\right) .... (7)$$

Where:

$NACC_{i,t}$: is normal accruals of firm (i) in year (t).

d) After evaluating total and normal accruals, discretionary accruals (abnormal accruals), resulting from pursuit of earnings management, are computed as follows.

$$EQR_{i,t} = \beta_0 + \beta_1 BTM_{i,t} + \beta_2 TATGP_{i,t} + \beta_3 Size_{i,t} + \beta_4 Leverage_{i,t} + \beta_5 ROI_{i,t}$$
$$+ \beta_6 CurrRatio_{i,t} + \beta_7 IndBD_{i,t} + \beta_8 EATurnover_{i,t} + \beta_9 EAprof_{i,t}$$
$$+ \beta_{10} IndAC_{i,t} + \beta_{11} ExperAC_{i,t} + \varepsilon_{i,t} \quad .... (9)$$

$$ANACC_{i,t} = TACC_{i,t} - NACC_{i,t} \quad .... (8)$$

Reduction of absolute value of discretionary accruals reflect decrease in opportunistic earnings management which eventually leads to increase of earnings qualities reducing dishonesty thus expressing real status of the company.

The relation between Earnings quality and Accounting conservatism

In our research on the relation between conservatism and earnings quality, we used two different methods to measure accounting conservatism. Afterwards, we measured earnings quality using two models at the first stage. While examining the relation between conservatism and earnings we designed two major models to measure this relation in which the dependent variable was earning quality. Therefore, two linear models were created each of which contains two measures of accounting conservatism and group of controlling variables, to control the relation between dependent and independent variables. Thus, models used to represent the relation between conservatism and earnings quality are four in number:

MODEL 1.1: EQR

In the first regression model, the dependent variable "earnings quality" was measured by using (Richardson *et al,* 2005) model and expressed through the continuous variable (EQR_{it}) as follows:

Where:

$EQR_{i,t}$: is a continuous variable: dependent variable: earnings quality measured through (Richardson *et al,* 2005) model for the company (i) in the year (t).

$BTM_{i,t}$: independent variable, book to market ratio as measure of accounting conservatism of the company (i) in the year (t).

$TATGP_{i,t}$: independent variable of total accruals to gross profit as measure of accounting conservatism of the company (i) in the year (t).

$Size_{i,t}$: control variable, size of the company measured through total assets of the company (i) in the year (t).

$Leverage_{i,t}$: control variable, financial leverage ratio, total debts/total assets of the company (i) in the year (t).

$ROI_{i,t}$: control variable, return on investment, net income/equity of the company (i) in the year (t).

$CurrRatio_{i,t}$: control variable, quick liquidity ratio, (current assets-inventory)/short term liabilities of the company (i) in the year (t).

$IndBD_{i,t}$: control variable, independence of the members of board of directors measured by ownership of members of the board for shares of the company (i) in the year (t).

$EATurnover_{i,t}$: control variable, external auditor turnover, measured by number of years of work for the external auditor of the company (i) at the end of the year (t).

$EAprof_{i,t}$: control variable, specialization of external auditor in customer's industry. It is a dummy variable given (1) if the auditor is specialized in customer's industry, or

else given (0), for the company (i) in year (t).

IndAC$_{i,t}$: control variable, independence of members of audit committee, a dummy variable given (1) when all members of the committee are non-executive, if not given (0), for the company (i) in the year (t).

ExperAC$_{i,t}$: control variable, financial experience of members of auditing committee measured by percentage of members holding a degree in financial sciences, for the company (i) in the year (t).

$\varepsilon_{i,t}$: random error.

MODEL 1.2: EQR-DV

In the second regression model, dependent variable "earnings quality" was measured by (Richardson *et al,* 2005) model and was expressed through the dummy variable EQRD-V$_{i,t}$ as Follows:

$$EQRD - V_{i,t} = \beta_0 + \beta_1 BTM_{i,t} + \beta_2 TATGP_{i,t} + \beta_3 Size_{i,t} + \beta_4 Leverage_{i,t} + \beta_5 ROI_{i,t}$$
$$+ \beta_6 CurrRatio_{i,t} + \beta_7 IndBD_{i,t} + \beta_8 EATurnover_{i,t} + \beta_9 EAprof_{i,t}$$
$$+ \beta_{10} IndAC_{i,t} + \beta_{11} ExperAC_{i,t} + \varepsilon_{i,t} \quad .... (10)$$

Where:

EQR-DV$_{i,t}$: is a dummy variable: dependent variable 'earnings quality' is measured by using (Richardson et al., 2005) model, (3) for high earnings quality (2) of doubtful earnings quality (1) for lower earnings quality of the company (i) in the year (t).

MODEL 2.1:EQJones
In the third regression model, dependent variable "earnings quality" was measured by absolute value of discretionary accruals elicited through Jones, (1991) model as follows:

Where:

EQJones$_{i,t}$ is continuous variable: dependent variable 'earnings quality' was measured by Jones (1991) model for the company (i) in the year (t).

MODEL 2.2: EQJones-DV

In the fourth regression model, dependent variable "earnings quality" was measured by absolute value of the discretionary accruals elicited by Jones (1991) model and explained through dummy variables as follows:

$$EQJones_{i,t} = \beta_0 + \beta_1 BTM_{i,t} + \beta_2 TATGP_{i,t} + \beta_3 Size_{i,t} + \beta_4 Leverage_{i,t} + \beta_5 ROI_{i,t}$$
$$+ \beta_6 CurrRatio_{i,t} + \beta_7 IndBD_{i,t} + \beta_8 EATurnover_{i,t} + \beta_9 EAprof_{i,t}$$
$$+ \beta_{10} IndAC_{i,t} + \beta_{11} ExperAC_{i,t} + \varepsilon_{i,t} \quad .... (11)$$

Where:

EQ JonesD-V$_{i,t}$: is a dummy variable, dependent variable 'earnings quality' was measured by Jones (1991) model, (3) for high earnings quality, (2) for doubtful earnings quality and (1) for low quality earnings of the company (i) in the year (t).

The main hypothesis of the study aims at measuring the relation between earnings quality and accounting conservatism which will be tested by using the previous four models that can be outlined as follows:

$$EQJonesD - V_{i,t} = \beta_0 + \beta_1 BTM_{i,t} + \beta_2 TATGP_{i,t} + \beta_3 Size_{i,t} + \beta_4 Leverage_{i,t} + \beta_5 ROI_{i,t}$$
$$+ \beta_6 CurrRatio_{i,t} + \beta_7 IndBD_{i,t} + \beta_8 EATurnover_{i,t} + \beta_9 EAprof_{i,t}$$
$$+ \beta_{10} IndAC_{i,t} + \beta_{11} ExperAC_{i,t} + \varepsilon_{i,t} \quad .... (12)$$

H$_a$: *The presence of a reasonable level of accounting conservatism when preparing*

financial reports helps in increasing the level of earnings quality.

At the onset we have to examine validity of data for statistical analysis. For this purpose, we used normal distribution test, Multicollinearity test, Autocorrelation test, and Homoskedasticity test. Validity of the study models representing correlation between accounting conservatism and earnings quality was secured. Thus, we can say that the study models in equations numbered (9, 10, 11, and 12) are accurate. All variables on the right side express non-random variables excluding the last one $\varepsilon_{i,1}$; $\varepsilon_{i,2}$; $\varepsilon_{i,3}$; $\varepsilon_{i,4}$ which is supposed to belong to natural distribution with zero average and fixed variance is expressed in σ^2_1; σ^2_2; σ^2_3; σ^2_4 .All these variables are independent ones. As for variables (EQR, EQRD-V, EQJones, and EQJonesD-V)they are dependent in the four models and have the same probability random error $\varepsilon_{i,1}$; $\varepsilon_{i,2}$; $\varepsilon_{i,3}$; $\varepsilon_{i,4}$ with a variance of σ^2_1; σ^2_2; σ^2_3; σ^2_4 and the average is:

$$\beta_0 + \beta_1.\ell(BTM_{i,t}) + \beta_2.\ell(TATGP_{i,t}) + \beta_3.\ell(Size_{i,t}) + \beta_4.\ell(Leverage_{i,t}) + \beta_5.\ell(ROI_{i,t})$$
$$+ \beta_6.\ell(CurrRatio_{i,t}) + \beta_7.\ell(IndBD_{i,t}) + \beta_8.\ell(EATurnover_{i,t}) + \beta_9.\ell(EAprof_{i,t})$$
$$+ \beta_{10}.\ell(IndAC_{i,t}) + \beta_{11}.\ell(ExperAC_{i,t}) + 0 \quad .... (13)$$

IV. DESCRIPTIVE STATISTICS

Table 1 shows the descriptive statistics of the continuous variables, dichotomous, and dummy variables. In Part A the table shows two standards for measuring earnings quality which are (Richardson *et al,* 2005) model referred to by the symbol (EQR) which considers earnings quality to less represent accruals. Therefore, *β* or *ρ*2<0, is more negative in representing accruals of returns in equation 3 and this implies high earnings quality. From table 1 we noticed

that the coefficient is low with a negative value and that refers to the high level of earnings quality declared by Jordanian industrial companies.

The second model was used to measure earnings quality is (EQJones) model based on absolute value of abnormal accruals. In part (c) of the table dummy variables were used to express earnings quality which was divided into three parts: High earnings quality, low earnings quality and questionable earnings quality. From this part of the table, we notice that high ratio of earnings quality was 47.7% according to EQR model, and 86.3% according to EQJones model. The ratio of low earnings quality was 50% according to EQR model and 13.7% according to EQJones model. Doubtful earnings quality was 2% according to EQR model, while there was no doubtful earnings quality according to EQJones model. These results are important indications of declared earnings quality that Jordanian companies enjoy. This result differ from findings of Qaraqeesh, (2009), he found that only 10% of earnings of the Jordanian industrial corporations are distinguished for high quality and 12% of them are distinguished for low quality while the main ratio was for the doubtful earning quality which was 78%. This discrepancy between our study and Qaraqeesh's is due to difference in the methodology and time series used.

From table 1 part A, we notice that the two variables EQR and EQ Jones do not follow normal distribution because Skewness does not approach zero and Kurtosis is far from 3. This emphasizes that data of these two

Table 1: Descriptive statistics for 50 industrial Jordanian listed companies during 2004-2009

Panel A: Continuous variables

Variable	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
EQR	-5.8E-05	1.4E-04	1.8E-06	2.3E-05	4.542	29.225
EQJones	857	94,987,322	2,744,096	8,947,228	6.222	47.623
BTM	-4.470	6.540	0.964	1.017	1.715	12.479
TATGP	-491.953	927.824	1.053	71.137	8.236	138.038
Size	430,303	1,083,134,000	43,649,884	122,732,088	5.501	34.771
Leverage	0.310	99.48	29.275	21.771	1.046	0.497
ROI	-374	26.070	1.886	23.697	-13.554	213.916
CurrRatio	0.030	24.690	3.107	2.909	2.994	13.951
IndBD	0	89.250	15.521	18.848	2.061	4.514
EATurnover	1	6	5.307	1.290	-1.669	1.491
ExperAC%	0	1	0.434	0.260	0.394	-0.058

Panel B: Dichotomous variables

Variable	Frequency of 1's	Frequency of 0's
EAprof	137 (45.7%)	66 (22%)
IndAC	213 (71%)	86 (28.7%)

Panel C: Dummy variables of earnings quality

Variable	High EQ	Doubtful EQ	Low EQ
EQRD-V	143 (47.7%)	6 (2%)	150 (50%)
EQJonesD-V	259 (86.3%)	0 (0%)	41 (13.7%)

variables never reach normal distribution. To overcome this problem natural logarithm was considered.

The two variables TATGP and BTM reflect the level of accounting conservatism in financial reports issued by Jordanian industrial corporations. The two negative ratios refer to accounting conservatism in financial reports. In table 1 part A, we notice that the Mean of the two ratios is positive and that reflects the low level of conservatism in financial reports of such companies. This result conforms too many

results of previous studies that dealt with the level of conservatism in financial reports of Jordanian companies as presented in studies of Hamdan, (2012) and Mustafa (2008).

Regarding relation between earnings quality and conservatism, our hypothesis was that such relation was positive in the sense that an increase in conservatism ensues increase in earnings quality. But table 2 does not show any relation with statistical significance between earnings quality and conservatism neither by using Pearson's or Spearman's tests. This gives us a preliminary indication

that a relation between conservatism and earnings quality never exists. About relation between company size and earnings quality, table 2 shows negative relation, with statistical significance for Pearson>s or Spearman>s correlation regarding earnings quality measured by EQR model. Such a thing indicates that companies with higher size are with higher earnings quality. We also notice that companies with higher financial leverage are with higher earnings quality.

From table (1) we also notice that return on investment (ROI) for Jordanian industrial companies were low through the period of study. It is negatively related to earnings quality according to Spearman's test. We also notice that quick liquidity of Jordanian industrial companies was at average (3) which is within the suitable range; it has a positive relation with earnings quality which shows that companies which keep suitable liquidity are distinguished for their earnings quality.

Regarding independence of member of directors, table 1 part A shows that average ownership of the members of board of directors for the company shares is 15% which sounds reasonable according to rules of corporate governance in Jordan. The highest amount was 89%, a high percentage that shows non-commitment to corporate governance. Unexpectedly, the percentage reveals negative relationship with quality earnings; the increase of ownership of members of the board of directors for the company stocks is highly related to earnings quality. The average turnover of external auditor at industrial companies is five years, one year minimally, and six years maximally.

The (EATurnover) has no significance relation with earnings quality which implies that the auditor's work in the company is not followed by any activities on his part to increase earnings quality. As for experience of members of audit committee; we find that 43% of audit committee members have experience in banking and financial sciences. According to Pearson's test, it has positive relation with earnings quality measured by (EQR) model. This shows that audit committee with financial experience is able to monitor company works and to achieve highest level of earnings quality.

Part B of table (1) shows dichotomous variables which include (AEprof) that indicates 45.7% of auditors are specialized in industry of customer, this secures higher audit quality. It was found that this variable has positive relation of statistical significance, with earnings quality measured by EQJones model. Such a thing indicates that specialization of the external auditor in industry of customer contributes in improving earnings quality. Finally, we also found that majority of members of audit committee in Jordanian industrial companies does not belong to executive members. Such a thing increases their independence and ability to function impartially and independently. But this independence of members of audit committee has no relation to improvement of earnings quality.

V. MODELS TESTING

Testing impact of conservatism on the enhancement of Earnings quality:

In the first model, (Richardson *et al,* 2005) method was used to explain earnings quality. Continuous variable ($EQR_{i,t}$) was used once

Table 2: Pearson (top) and Spearman (bottom) correlations matrix for 50 industrial Jordanian listed companies during 2004-2009 (correlations are above diagonal; p-values are shown in parentheses) * and ** denote significance at the 0.05 and 0.01 levels

	EQR	EQJones	BTM	TATGP	Size	Leverage	ROI	CurrRatio	IndBD	EATurnover	EAprof	IndAC	ExperAC
EQR		0.001 (0.979)	0.026 (0.696)	0.011 (0.871)	-0.277** (0.000)	0.032 (0.578)	-0.303** (0.000)	0.191** (0.001)	0.356** (0.000)	0.077 (0.184)	0.184 (0.103)	0.006 (0.920)	-0.178** (0.002)
EQJones	0.001 (0.993)		-0.001 (0.990)	-0.010 (0.881)	-0.044 (0.452)	0.093 (0.109)	-0.048 (0.406)	0.140* (0.015)	-0.011 (0.855)	-0.052 (0.373)	-0.173* (0.014)	-0.086 (0.140)	0.047 (0.418)
BTM	0.043 (0.518)	0.019 (0.775)		-0.104 (0.119)	0.027 (0.683)	0.022 (0.747)	-0.029 (0.662)	0.052 (0.432)	0.019 (0.780)	0.052 (0.438)	-0.125 (0.081)	-0.197** (0.003)	0.174** (0.009)
TATGP	-0.075 (0.259)	-0.028 (0.670)	-0.173** (0.009)		-0.001 (0.983)	-0.059 (0.375)	-0.001 (0.992)	-0.041 (0.537)	-0.001 (0.984)	0.102 (0.125)	0.108 (0.129)	-0.047 (0.483)	0.123 (0.064)
Size	-0.240** (0.000)	0.043 (0.459)	-0.090 (0.175)	0.044 (0.511)		0.042 (0.470)	-0.035 (0.545)	0.050 (0.389)	-0.162** (0.005)	-0.008 (0.886)	-0.160* (0.023)	0.028 (0.633)	0.120* (0.038)
Leverage	0.185** (0.001)	0.085 (0.144)	0.024 (0.724)	-0.058 (0.382)	0.111 (0.056)		-0.022 (0.702)	0.083 (0.155)	-0.200** (0.001)	0.036 (0.531)	-0.080 (0.257)	0.118* (0.042)	-0.153** (0.008)
ROI	0.082 (0.158)	-0.088 (0.128)	-0.358** (0.000)	-0.063 (0.347)	-0.132* (0.023)	0.019 (0.741)		0.040 (0.494)	-0.116* (0.045)	-0.028 (0.633)	-0.108 (0.126)	-0.026 (0.654)	-0.020 (0.735)
CurrRatio	0.213** (0.000)	0.012 (0.835)	0.151 (0.023)	-0.059 (0.373)	-0.057 (0.330)	0.205** (0.000)	0.254** (0.000)		0.102 (0.080)	0.093 (0.111)	-0.149* (0.035)	-0.047 (0.420)	-0.060 (0.302)
IndBD	0.033 (0.571)	0.162** (0.005)	-0.060 (0.371)	-0.137* (0.040)	-0.141* (0.014)	-0.148* (0.010)	0.047 (0.418)	-0.004 (0.946)		-0.007 (0.909)	-0.165* (0.019)	-0.097 (0.095)	-0.199** (0.001)
EATurnover	0.059 (0.309)	-0.083 (0.150)	0.047 (0.480)	-0.003 (0.960)	0.028 (0.625)	0.045 (0.436)	0.015 (0.799)	0.068 (0.243)	-0.070 (0.229)		-0.119 (0.091)	0.098 (0.089)	0.112 (0.054)
EAprof	0.228** (0.001)	0.055 (0.433)	-0.016 (0.824)	0.061 (0.392)	0.027 (0.697)	-0.079 (0.266)	-0.074 (0.295)	-0.093 (0.190)	-0.034 (0.630)	-0.132 (0.060)		0.222** (0.001)	-0.012 (0.869)
IndAC	0.064 (0.267)	0.005 (0.928)	-0.102 (0.123)	0.118 (0.075)	-0.056 (0.336)	0.070 (0.229)	0.044 (0.445)	-0.077 (0.185)	-0.050 (0.390)	0.097 (0.094)	0.222** (0.001)		-0.085 (0.146)
ExperAC	-0.110 (0.059)	-0.004 (0.943)	0.203** (0.002)	0.035 (0.604)	0.041 (0.481)	-0.208** (0.000)	-0.180** (0.002)	-0.105 (0.072)	-0.201** (0.000)	0.059 (0.307)	-0.023 (0.750)	-0.097 (0.096)	

and dummy variable (EQRD-V$_{i,t}$) was used in the other time. The results of the two sub-models are shown in table 3. Then the sub-model (1.1) it was tested by OLS method because dependent variable (EQR$_{i,t}$) was a continuous variable. As for sub-model (1.2), it was tested through Binary Logit method because dependent variable (EQRD-V$_{i,t}$) was a dummy one. These two sub-models were under Pooled Regression method.

From table (3) we notice that the variable (BTM) of model 1.1 which represents accounting conservatism has a positive indication; which means that increase in accounting conservatism might contribute to enhancement of level of earnings quality, but this relation had no statistical significance at 1% or 5%, levels. So did the (TATGP) variable which showed a positive indication that had no statistical significance. Regarding sub-model 1.2 relation between accounting conservatism and earnings quality was negative. Despite being an illogical relation, it showed no statistical significant.

To assure pervious results, a second major model was used in which earnings quality was measured using Jones (1991) model whose results appear in table 4. From this table we notice that the two variables

(BTM) & (TATGP) didn't have any statistical significance. This emphasizes the results emerged using the first major model. When looking at which of the two models best represents the relationship between accounting conservatism and earnings quality, we compare between Adjusted R^2 shown in the two tables 3 and 4 of the two sub-models (1.1: EQR & 2.1: EQJones) and the (Akaike) value of the two models (1.2: EQRD-V & 2.2: EQJonesD-V). Based on this, we notice that the value of Adjusted R^2 of the first sub-model of the second major model more than the value of Adjusted R^2 of the first sub-model of the first major model (Adj. R^2 of 2.1: EQJones > Adj. R^2 of 1.1: EQR), and the (Akaike) value of the model (2.2) is less than model (1.2); (Akaike of 2.2: EQJonesD-V < Akaike of 1.2: EQRD-V).

This indicates that the second major model based on Jones, (1991) was a better representative of the relation between accounting conservatism and earnings quality. Anyhow, based on the results of the two models we can never reject null hypothesis. Therefore, there are no statistical significance of accounting conservatism in improving earnings quality of the Jordanian industrial corporations.

Table 3: Pooled regression results to first model

Variable	Predicted sign	Model1	
		Ordinary Least Squares	Binary Logit
		Model 1.1 EQR	Model 1.2 EQRD-V
BTM	+	0.107	-0.776
		(0.915)	(0.438)
TATGP	+	1.090	-1.274
		(0.277)	(0.203)
Size	+/-	-2.605**	0.774
		(0.010)	(0.439)
Leverage	-	0.670	-4.218**
		(0.504)	(0.000)
ROI	+/-	1.165	-0.237
		(0.246)	(0.813)
CurrRatio	+/-	-1.395	-2.551**
		(0.165)	(0.011)
IndBD	-	0.664	-0.650
		(0.507)	(0.516)
EATurnover	+/-	-0.752	2.979**
		(0.453)	(0.003)
EAprof	-	1.505	-4.536**
		(0.134)	(0.000)
IndAC	-	-0.943	1.084
		(0.347)	(0.279)
ExperAC	-	-1.392	-0.741
		(0.166)	(0.459)
F-statistic		2.055*	
p-value		0.026	
R-Square		0.111	
Adjusted R-Square (Akaike)		0.057	1.211

OLS: t-test (top), p-value (bottom), two-tailed. Binary logit: z-test (top), p-value (bottom).
t-Critical: at df 39, and confidence level of 99% is 2.390 and level of 95% is 1.671 and level of 90% is 1.296
z-Critical: at confidence level of 95% is 1.650
F-Critical (df for denominator n-β-1 = 50-11-1 = 38) and (df for numerator =β =11) and confidence level of 99% is 2.730 and confidence level of 95% is 2.040

Table 4: Pooled regression results to second model

Variable	Predicted sign	Model2	
		Ordinary Least Squares	Binary Logit
		Model2.1EQJones	Model2.2 EQJonesD-V
BTM	+	-0.587	-1.292
		(0.558)	(0.197)
TATGP	+	0.774	0.772
		(0.440)	(0.440)
Size	+/-	-2.181*	2.278*
		(0.031)	(0.023)
Leverage	-	0.567	-0.968
		(0.571)	(0.333)
ROI	+/-	-1.382	1.152
		(0.169)	(0.250)
CurrRatio	+/-	-2.371*	-2.711**
		(0.019)	(0.007)
IndBD	-	-0.435	-0.210
		(0.664)	(0.834)
EATurnover	+/-	-1.477	4.109**
		(0.141)	(0.000)
EAprof	-	-1.559	-0.158
		(0.121)	(0.875)
IndAC	-	0.629	0.674
		(0.530)	(0.500)
ExperAC	-	1.407	-1.201
		(0.161)	(0.230)
F-statistic		2.954**	
p-valued		0.001	
R-Squared		0.152	
Adjusted R-Squared (Akaike)		0.101	0.744

OLS: t-test (top), p-value (bottom), two-tailed. Binary logit: z-test (top), p-value (bottom).

t-Critical: at df 49, and confidence level of 99% is 2.390 and level of 95% is 1.671 and level of 90% is 1.296

z-Critical: at confidence level of 95% is 1.650

F-Critical (df for denominator n-β-1 = 50-11-1 = 38) and (df for numerator =β =11) and confidence level of 99% is 2.730 and confidence level of 95% is 2.040

VI. TESTING THE CONTROL VARIABLES

Company size and its impact on earning quality: tables (3) & (4) show that there is negative relation, with statistical significance, between company size and earnings quality. This shows that companies of big size are distinguished for higher earnings quality. Due to the commitment of big companies to apply accounting standards. The study of Hamdan, *et al,* (2013, forthcoming) found a positive relation, between the company size and earnings quality measured by the model of Richardson, *et al,* (2005) while that relation had no influence on the earnings quality measured by the adjusted Jones, (1995) model.

Influence of financial leverage on earnings quality: Qaraqeesh, (2009) found that financial leverage affects the level of earnings quality in Jordanian industrial company. The company's high financial leverage lowers earnings quality. Our findings, based on 2.1 model, differ from Qaraqeesh's findings. Table (3) shows negative effect, with statistical significance, on leverage variable of (EQRD-V). This shows that there is a positive relation between earnings quality and financial leverage; companies with higher debts are distinguished for earnings quality, but, leverage variable in the other models (EQR, EQJones, and EQJones D-V) had no effect on earnings quality.

Relation of return on investment to earnings quality: We examined whether there was a relation between returns on investment and the level of earnings quality. Tables 3 and 4 show no effect of ROI variable on earnings quality.

Relation between liquidity and earnings quality: Tables 3 and 4 show that there is negative impact, with statistical significance,, for (CurrRatio) liquidity variable on earnings quality measures. This reflects positive relation as high level of liquidity is related to increase of earnings quality which stems from low accruals of the company returns.

Impact of independence on the board of directors members on earnings quality: Using four models, our study did not find any impact of independence of the members of board of directors on the improving of earnings quality, on such independence, These findings conform to the findings of (Wang, 2007) who didn't support (Lai & Tam, 2007; Jenkins, *et al,* 2006; (Qaraqeesh, 2009) that increase of independent members in the board of directors contribute to improving of earnings quality.

Influence of external auditor turnover: According to the study of (Shokley, 1982), the long relation between the company and external auditor might make him less creative by adoption of less rigid techniques and depending on what the company does regarding procedures and remedies without verification. Hamdan and Mushtaha, (2011) did not find any effect on average of external auditor turnover in improving quality of financial reports. In our study we found that there is positive impact, with statistical significance, of external auditor turnover variable on earnings quality (see models 1.2 and 2.2). This is an evidence that when the period of work for external auditor is shorter, it provides him with more power to control company works to improve its earnings quality.

Influence of external auditor specialty on earnings quality:

Study of Hamdan & Abu Ijeila, (2012) didn't find any influence of external auditor's specialty on customer's industry, with regard to reducing practices of earnings management or improving the level of earnings quality. In our study, we did not find any influence, with statistical significance, of the variable (EAProf) on earnings quality in the three models: 1.1, 2.1 and 2.2, But it has negative influence, with statistical significance in the fourth model (1.2). This shows that there is positive relation between auditor's specialty in the industry of the customer and earnings quality. The companies audited by external auditor specialized in their industry is more able to better understand its activities and procedures and thus improve its earning quality.

Influence of independence of audit committees on earnings quality: Study of Hamdan and (Mushtaha, 2008) didn't find any impact of independence of members of the audit committee (executive and non-executive) on improving quality of financial reports. Qaraqeesh (2009) found that there was positive influence for independence of members of audit committee on earnings quality. Our study disagrees with this finding as it did not find any influence, with statistical significance, for independence of members of audit committee on improving of earnings quality of Jordanian industrial companies.

Influence of financial experience of members of audit committees on earnings quality: Study of Hamdan and (Mushtaha, 2008) found out that financial experience of members of audit committees had helped

in improving financial reports quality. This conforms to the findings of (Saleh *et al,* 2007) study which states that companies whose members of the audit committees have experience help limit practices of earnings management. In addition, Baxter and Cotter, (2008) and Qaraqeesh, (2009) found that financial experience of members of audit committee help in improving the level of earnings quality. Our findings disagree with past findings as (ExperAc) variable didn't reflect any statistical significance in any of the four study models. Such a thing indicates that financial experience of members of audit committee in Jordanian companies didn't help in raising the level of earnings quality in them. This discrepancy in results might be due to difference in methods and samples used in the present study.

VII. DISCUSSION OF CONCLUSION AND RECOMMENDATIONS

Earnings quality declared by companies plays an important role in economic decisions for many of concerned parties. Therefore, measuring the level of earnings quality and factors influencing it are considered an important issue for these parties.

The real contribution of the current study in existing literature in providing additional evidence about the relationship between accounting conservatism and earnings quality from developing countries. It also uses the new models to measure the earnings quality in Jordanian corporation, which in not used by previous studies in this environment (such as: Qaraqeesh, 2009). The importance of this study it is looking for relationship between the conservatism and

earnings quality in Jordan, which regularly takes steps towards the regulatory and legislative structure to support economic development, which distinguishes it from other studies conducted in the United States and Australia.

Based on that, this study aimed at measuring the level of earnings quality announced by Jordanian industrial companies between 2004-2009 using two different models (Richardson *et al,* 2005) and Jones (1991) modified by (Dechow *et al,* 1995).

After measuring earnings quality, the study focused on measuring influence of accounting conservatism on improving the level of earnings quality to complete the study that looked into the role of accounting conservatism in improving the quality of financial reports and accounting disclosure. Thus we made two major models which represent the relation between accounting conservatism and earnings quality. Findings of the study revealed that high percentage of Jordanian industrial companies were distinguished for earnings quality and that was contrary to Qaraeesh's (2009) who found a low level of earnings quality for Jordanian industrial companies. This difference in results may be due to the different methodologies used, such asdifference in measuring earnings quality which may lead to different evaluation. The same company may have high evaluation of earnings quality or low one depending on the measurement model used (Abdelghani, 2005), this discrepancy might also be due to different samples and time periods of the study.

In the second part of this study, the influence of conservatism on improving the level of earnings quality. Earnings quality was sometimes expressed through continuous variables and other times through dummy ones. By testing four models, this study didn't find any indication to support our hypothesis that accounting conservatism helped in improving earnings quality in the Jordanian industrial companies. Those models which were supported by control variables showed that some influenced the level of earnings quality like company size, liquidity, and external auditor turnover, while others like: return on investment, independence of the members of board of directors, independence of audit committees, financial experience of members of audit committees, financial leverage, and specialization of external auditor in customer's industry.

In general,the study recommends that organizers of works of Jordanian companies, like the stock market and government authorities, support the mechanism of accounting conservatism, to secure more transparency in disclosures, and in improving earnings quality for they all leave a significant impact on the economic decisions of many parties.

However, with a small sample size, caution must be applied, as the findings might not be generalizable. This research has thrown up many questions in need of further investigation; it is recommended that further research be undertaken in the following areas: the impact of audit committee characteristics on enhancement of accounting conservatism, and factors affecting the earnings quality of Jordanian corporations.

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